**11.1 Solving Equations**

Name:\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

**Lesson Focus:** In this lesson, Mathletes will be able to

**·**·identify constants, numerical coefficients, and variables in expressions and equations

·describe the difference between an expression and an equation

**Power Words:**

Equation

·a mathematical statement with two expressions that have the same value

·x + 2 = 3, y - 7 = -4, 3a - 2 = a + 2, and b = 4 are all examples of equations.

· Think of it this way: *THIS* side equals *THAT* side

*What are some of your own examples of equations?*

*How are equations different from expressions?*

*How can we tell the difference between an equation and an expression?*

*Write an example of an EQUATION and an EXPRESSION then identify the variables, constants, and coefficients*

Ex 1: Identify Expressions and Equations

·Model each phrase using cups and counters.

·Write each phrase as an expression or equation.

·Identify any variables, numerical coefficients, and constants used in the expression or equation.

a) three times a number minus five

b) two times a number plus four equals ten

+

Expression/Equation:

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Let ­­\_\_\_ represent the unknown number of counters in each cup.

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**Introduction to ALGEBRA TILES!!!!!!!!!!!!!!!!!!!**

The equation is:

The variable is \_\_\_.

The first expression is: The second expression is:

a) What are the two expressions that make up this equation?

b) What is the equation?

The algebra tile diagram represents an equation.

Ex 2: Write Expressions and Equations

variable(s):

coefficient(s):

constant(s):

*x*

*x*

*x*

variable(s):

coefficient(s):

constant(s):

Key Ideas:

·An expression can be a single constant, a single variable, or a combination of operations with constants, variables, or numerical coefficients.

·An equation is made up of two expressions that are equal in value to each other.

·Expressions and equations *both* contain variables, numerical coefficients, and constant.

·***ALWAYS identify what your variable stands for***

Working Together: Let’s make up some of our own examples to try…

**Assignment**

· p. 392, #1-5, 7, 9, MATHLINK!!!

· Still Good? #10-12

· Pro Star? #13-15